

Claims

It is claimed:

1. A gas generator comprising:

an inner tube and an outer tube arranged concentrically one in the other, said inner tube
5 forming a combustion chamber, containing fuel and being closed with a cover plate and an end
plate;

an igniter tube extending through said combustion chamber and joining said cover plate
to said end plate;

an ignition element disposed in said cover plate, said ignition element having an outlet
10 opening for the ignition gases in communication with said igniter tube;

a longitudinal displaceable piston disposed in said igniter tube;

said igniter tube having radial openings into the combustion chamber disposed therein;

said igniter tube being joined in the end plate to an outlet.

2. The gas generator according to claim 1, wherein a discharge chamber is disposed in said
15 end plate, said outlet of said igniter tube opening into said discharge chamber, said
discharge chamber being connected through blowout openings to an afterburning chamber
disposed between said outer tube and said inner tube.

3. A gas generator according to claim 1, wherein said piston is joined to said cover plate with
20 a break-away edge.

4. A gas generator according to claim 1, wherein an area for receiving said piston is disposed in said discharge chamber behind said discharge openings in the direction of flow.

5. A gas generator according to claim 1, wherein the number of radial openings in said igniter tube increases toward said outlet chamber.

6. A gas generator according to claim 1, wherein discharge openings are disposed in said outer tube.

7. A gas generator according to claim 1, wherein said discharge openings and said blow-out openings are closed by a membrane.

8. A gas generator according to claim 7, wherein after the ignition of said ignition element said piston tears open the blow-out openings.

9. A gas generator according to claim 1, further comprising cooling elements disposed in said afterburning chamber.

10. Fuel for use in a gas chamber comprising nitrous oxide and at least one organic substance

11. The fuel of claim 10, wherein said organic substance is selected from the group consisting of polyethylene, starch and paraffin.